

CLAIMS:

1. In a method for transforming a plant cell to express a chimeric gene, the improvement which comprises a chimeric gene containing a promoter from cauliflower mosaic virus (CaMV).

2. A method of Claim 1 in which the promoter is the CaMV(35S) promoter.

3. A method of Claim 1 in which the promoter is the CaMV(19S) promoter.

4. A chimeric gene which is expressed in plant cells comprising a promoter from cauliflower mosaic virus and a structural sequence which is heterologous with respect to the promoter.

5. A chimeric gene of Claim 4 in which the promoter is the CaMV(35S) promoter.

6. A chimeric gene of Claim 4 in which the promoter is the CaMV(19S) promoter.

7. A plant cell which expresses a polypeptide by steps comprising transcription of a chimeric gene which comprises a promoter from cauliflower mosaic virus and a structural sequence encoding said polypeptide which is heterologous with respect to the promoter.

8. A plant cell of Claim 7 in which the promoter is the CaMV(35S) promoter.

9. A plant cell of Claim 7 in which the promoter is the CaMV(19S) promoter.

10. An intermediate plant transformation plasmid which comprises a region of homology and a T-DNA border from Agrobacterium tumefaciens and a chimeric gene, wherein the chimeric gene is located between the T-DNA border and the region of homology, said chimeric gene comprising a promoter from cauliflower mosaic virus and a structural sequence which is heterologous with respect to the promoter.

11. An intermediate plasmid of Claim 10 in which the promoter is the CaMV(35S) promoter.

12. An intermediate plasmid of Claim 10 in which the promoter is the CaMV(19S) promoter.

5 13. A plant transformation vector which comprises a modified plant tumor inducing plasmid of Agrobacterium tumefaciens which is capable of inserting a chimeric gene into susceptible plant cells, wherein the chimeric gene comprises a promoter from cauliflower mosaic virus and a structural sequence which is heterologous with respect to the promoter.

10 14. A plant transformation vector of Claim 13 in which the promoter is the CaMV(35S) promoter.

15 15. A plant transformation vector of Claim 13 in which the promoter is the CaMV(19S) promoter.

20 16. A differentiated plant comprising plant cells which express a polypeptide by steps comprising transcription of a chimeric gene which comprises a promoter from cauliflower mosaic virus and a structural sequence encoding said polypeptide which is heterologous with respect to the promoter.

25 17. A differentiated plant of Claim 16 in which the promoter is the CaMV(35S) promoter.

18. A differentiated plant of Claim 16 in which the promoter is the CaMV(19S) promoter.